REMARKS/ARGUMENTS

This application has been carefully considered in light of the Initial Office Action on the merits mailed December 7, 2004. In the Initial Office Action claims 1, 7, 8, 16 and 18 have been rejected under 35 U.S.C. § 103(a) as being obvious and therefore unpatentable over US Patent 3,605,210 to Lohr. In view of the remarks set forth below, reconsideration of this grounds for rejection is respectfully requested.

The Examiner has indicated that claims 2-6, 9-15 and 17 are only objected to as being dependent from a rejected base claim but would be allowable if rewritten in independent form to include the limitations of the base claim and any intervening claims.

The present invention is directed to a buckle for use with a vehicle belt restraint system wherein a latch plate associated with the harness belt can not be accidentally released from the buckle due to inertial forces or other forces applied to any portion of the buckle due to vehicular accident. In this respect, the present invention includes two latching mechanisms which are disposed in opposing relationship and each of which is urged to first outer locking positions by a resilient element which applies a generally equal amount of force to each of the

In the Drawings

Submitted with this response are eight (8) sheets of replacement formal drawings which are submitted to overcome the Notice of Draftsperson's Patent Drawings Review which was attached to the Initial Office Action. In view of the submission of these replacement drawings, it is respectfully submitted that any objection to the drawings has now been overcome.

Attachment: Replacement Drawing Sheets, 8

locking mechanisms. As set forth in claim 1, the latching mechanisms are slidable transversely in guide channels with respect to a longitudinal central axis of the buckle and are disposed such that any force applied to either latching mechanisms to urge it to a second release position applies a generally equal and opposite force to the opposing latch mechanism to urge it to be retained in its first locked position with respect to the latch plate, thus assuring that the latch plate can not be accidentally displaced. Utilizing the teachings of the present invention manual force must be applied simultaneously to each of the latching mechanisms in order to simultaneously move them to their second release positions in order to remove the latch plate from the buckle housing. This unique operative characteristic can not be found in the cited reference to Lohr.

The reference to Lohr discloses latching mechanisms 40, 42 which are pivotally mounted within a buckle and which include large mass portions extending outwardly from the pivot and on an opposite side of their pivot mountings from the latch engaging portions. The body portions engage a push-button release member such that each latch mechanism is at all times coupled to the release member. This coupling engagement is shown by the

extensions 70 and 72 of the release member which fit into slots 74 and 76 in the enlarged body portion of each latch mechanism as clearly shown in Fig. 3 of the reference.

Because of the manner in which the latch mechanisms 40 and 42 of the reference to Lohr are mounted within the buckle and coupled with the side release member 64, the latch plate 14 may be easily ejected from the buckle by inertial forces applied either generally along the elongated axis of the buckle, as exemplified at F_1 in a copy of Fig. 3 attached to this response, or by forces applied transversely with respect to the elongated axis, as shown at F_2 of the drawing of Fig. 3 attached to this response. If an outside force such as shown at F_1 is applied to the end frame 20 of the buckle, the force will cause the massive portion of the latching mechanisms and the slide release member 64 to move relative to one another due to the relationship between the projections 70, 72 and the slots 74 and 76 in the latch mechanisms. The latch mechanism 42 would be pivoted counterclockwise to the dotted position shown in drawing Fig. 3 and latch mechanism 42 would be pivoted to the dotted line position also shown in Fig. 3 whereby the hooked end portions would allow the latch plate 14 to be released.

In the event force is applied transversely as shown at F_2 of

the buckle, the force would direct the latch mechanism 40 to be more securely engaged in the full line position shown in Fig. 3, however, the same force would cause the opposite latching mechanism 42 to be moved counterclockwise to the dotted line position, and because of the coupling between the latching mechanism 42 and the slide member 64, the slide member would be pushed toward a release position thereby pivoting the latch mechanism 40 to a release position shown in dotted line and allowing the latch plate 14 to become disengaged from the buckle.

The foregoing scenarios are possible because of the pivot mounting of the latch mechanisms within the buckle of the reference to Lohr and also because of the massive body portion of each latch mechanism which is on the opposite side of the pivot axis from the latch hooks. Further, the body portions are also slidingly engaged with the release member 64.

With applicant's invention as defined in the embodiment of Figs. 14-27 wherein a single slide release member is utilized, the slide release member is not coupled or connected to the latch mechanisms. If a force similar to F_1 is applied along the length of the longitudinal axis of the buckle of the present invention, the slide release member will be pushed inwardly, however, the tang member shown at 114 is forced intermediate the latch

mechanisms, as shown in Fig. 24, thereby preventing the latch mechanisms from being moved to their second release position. In addition, the release member 140 shown in the drawings of the present invention is normally retained in its first or outer position by at least one spring element 150. Therefore, the force of the spring element 150 must be overcome before the release member can be moved toward an engagement with the latch mechanisms of the present invention to effect movement of the latching mechanisms to a second release position.

Further, if a force is applied transversely to the buckle of the present invention, such as shown at F_2 in the attached drawing of the reference to Lohr, the adjacent latch mechanism may be moved towards a second release position, however, during such movement, a force is applied by the interconnecting resilient or spring element to the opposing latch mechanism applying an equal or opposite force to retain the opposite latch mechanism in its first locked position thus preventing an accidental withdrawal of the latch plate from the buckle housing. The latch mechanism of the present invention do not interconnect and are not coupled to the slide release member in the embodiment where a single slide release member is used and thus this member can not adversely effect the latching relationship of the latch

mechanisms with the latch plate caused by forces applied to the body of the buckle during a vehicle accident.

In view of the foregoing, it is respectfully submitted that the reference to Lohr can not teach a method as set forth in claim 16 wherein the application of an inertial force to the buckle which causes one of the pair of latching mechanisms to be urged to its second release position results in equal and opposite force being applied to retain the other latch mechanism in its first locked position and thereby prevents the accidental release of a latch plate from the buckle housing. Such a method step is not possible in the reference to Lohr because of the interconnection of the latch mechanisms with respect to the slide release member.

Concerning claim 1, it should be noted that the reference to Lohr can not provide a means which constantly urges the latching mechanisms toward the first latching positions with oppositely directed forces such that when one of the latching mechanisms is urged toward its second release position by an inertial force, a simultaneously and substantially equal increase in force is applied to retain the other latching mechanism in its first locking position. This is possible with the present invention because the present invention utilizes opposing latching

mechanisms which are slidably mounted within the buckle housing. In the cited reference, latching mechanisms are pivoted thereby providing masses on the opposite side of the pivot point which creates a non-desirable pivot movement of the hooked ends of the latch mechanisms under certain applied inertial forces.

Further, the present invention, as set forth in claim 1, defines that the latching mechanisms are guided within the housing within a channel and no such channel type guide is disclosed in the reference to Lohr which extends transversely to the central longitudinal axis of the housing. In view of the foregoing, there are structural differences between the invention as set forth in claim 1 and the reference to Lohr which result in the present invention providing for a non-inertial release restraint buckle assembly which is not possible utilizing the teaches of the reference to Lohr for the reasons discussed above.

In view of the foregoing, reconsideration of the grounds for rejection of claims 1, 7, 8, 16 and 18 and allowance of claims 1-17, 19 and 20 is respectfully solicited.

An earnest effort has been made to place this application in condition for allowance which action is requested. Should the Examiner have any questions concerning the amendment submitted herewith or the allowability of the claims with respect to the

prior art, it would be appreciated if the Examiner would contact the undersigned attorney-of-record for purposes of scheduling a personal interview for further facilitating the prosecution of the application. It is further requested that the interview be granted before taking any action which may be considered final.

Respectfully submitted,

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